WASHINGTON STATE DEPARTMENT OF HEALTH
OFFICE OF FOOD SAFETY AND SHELLFISH PROGRAMS

ANNUAL GROWING AREA REVIEW

PREPARED BY: Donald J. Melvin, Environmental Specialist

AREA: Portage Bay

YEAR ENDING: December 31, 2005

CLASSIFICATION: Approved, Restricted, Prohibited

ACTIVITIES IN THE GROWING AREA IN 2005:

Each station was sampled 11 times during 2005 using the systematic random sampling method. The area was closed for a total of 48 days due to sewage treatment plant collection system problems.

ANALYTICAL RESULTS OF WATER SAMPLES:

Table #1 summarizes the results of the most recent 30 water samples collected from the area. This summary shows that all "approved" stations pass the NSSP approved water quality standard. Station #51 is threatened and stations #49, #50 #55, and #272 are of concern due to elevated bacteria levels. Individual sample results for station #51 are shown in Table 2.

CHANGE IN ACTUAL POLLUTION SOURCES THAT IMPACT THE GROWING AREA:

We have no information indicating that the area has new sources of pollution.

CLASSIFICATION STATUS:

☐ Well within the classification standards
☐ Meets standards but some concerns
☒ Meets standards but threatened with a downgrade in classification
☐ Fails to meet classification standards

REMARKS AND RECOMMENDATIONS:

The following 303d listed surface water bodies have the potential to influence water quality in Portage Bay: the Nooksack River and its associated tributaries including Bertrand Creek, Double Ditch Drain, Duffner Ditch, Fishtrap Creek, Kamm Slough, and Tennant Creek. Table #1 shows that all "approved" stations meet the NSSP "approved" water quality standards and the area is appropriately classified.

TABLE 1

SUMMARY OF MARINE WATER DATA (SRS)

Growing Area: **PORTAGE BAY**

Classification: **Approved,Prohibited,Restricted**

From **05/20/2003** To **12/07/2005**

FECAL COLIFORM ORGANISMS/100 ML

Station Number	Classification	Number of Samples	Range	Geometric Mean	Est. 90th Percentile	Meets Std.
49	Approved	30	1.7 - 70.0	5.8	27.0	Yes
50	Approved	30	1.7 - 110.0	6.3	27.0	Yes
51	Approved	30	1.7 - 110.0	7.3	36.0	Yes
53	Approved	30	1.7 - 49.0	3.5	12.0	Yes
54	Approved	30	1.7 - 49.0	4.4	19.0	Yes
55	Approved	30	1.7 - 84.0	5.2	22.0	Yes
57	Approved	30	1.7 - 49.0	3.8	14.0	Yes
58	Approved	30	1.7 - 49.0	3.9	16.0	Yes
272	Approved	30	1.7 - 64.0	6.4	29.0	Yes
48	Prohibited	30	1.7 - 23.0	2.8	7.0	Yes
52	Restricted	30	1.7 - 130.0	6.6	27.0	Yes
271	Restricted	32	1.7 - 79.0	6.7	34.0	Yes

All tides information is presented

The standard for approved shellfish growing waters is fecal coliform geometric mean not greater than 14 organisms/100 ml and an estimate of the 90th percentile not greater than 43 organisms/100 ml. The above table shows bacteriological results in relation to program standards.

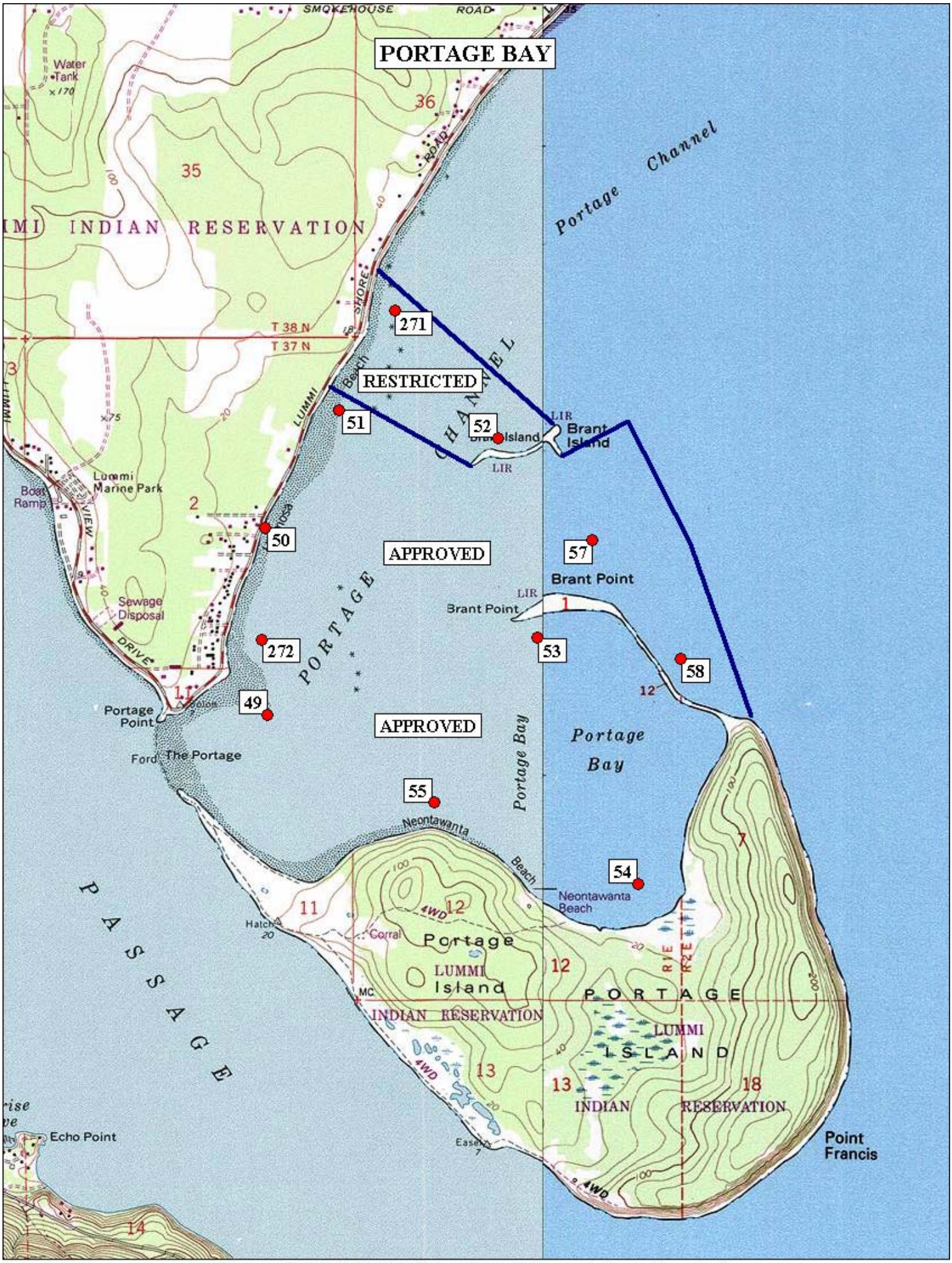
Table 2

SUMMARY OF SHELLFISH GROWING AREAS
WATER QUALITY STUDY RESULTS

Growing Area: **PORTAGE BAY**
Sampling Station Number: **51**
Classification: **Approved**

Sample Date	Sample Time	Tide	Fcoli/100ml	Temperature	Salinity
05/20/2003	07:43	Flood	4.5	14	18
06/18/2003	08:05	Ebb	49	14	27
07/16/2003	07:18	Ebb	1.7	15	29
08/21/2003	14:07	Flood	2	17	28
09/17/2003	12:16	Flood	2	15	20
10/15/2003	11:23	Ebb	33	9	15
11/13/2003	10:19	Ebb	27	6	21
12/17/2003	12:30	Ebb	17	6	16
01/14/2004	12:16	Ebb	4.5	6	26
02/11/2004	08:38	Flood	23	3	10
03/16/2004	10:52	Flood	2	8	26
04/13/2004	10:53	Flood	13	7	11
05/11/2004	09:48	Flood	33	11	4
06/08/2004	09:01	Flood	49	13	4
07/21/2004	07:44	Ebb	4.5	19	8
08/24/2004	14:17	Flood	110	17	8
09/21/2004	13:41	Ebb	13	14	10
10/20/2004	12:07	Flood	2	11	30
11/17/2004	11:00	Ebb	27	6	7
02/08/2005	14:11	Flood	7.8	4	11
03/08/2005	13:53	Flood	2	9	9
04/06/2005	14:43	Flood	4.5	9	5
05/03/2005	13:49	Flood	1.7	14	28
06/09/2005	07:24	Ebb	7.8	14	4
07/18/2005	14:57	Flood	1.7	19	25
08/24/2005	09:51	Flood	2	18	25
09/28/2005	14:32	Flood	2	14	25
10/12/2005	13:54	Flood	17	12	9
11/08/2005	14:15	Ebb	6.8	9	14
12/07/2005	11:10	Flood	4.5	10	22

Number of Samples: 30
Range: 1.7 - 110
Geometric Mean: 7.3
Estimated 90th Percentile: 36



Most recent five-year trend in fecal coliform pollution.